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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/517,961 | 03/03/2000 | Diheng Qu | CISCO-1936 | 5733 |

7590 12/23/2003

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| EXAMINER | |
|---|---|
| HENEGHAN, MATTHEW E | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2134 | 5 |

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/517,961 | QU ET AL. | |
| | Examiner | Art Unit | |
| | Matthew Heneghan | 2134 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 March 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 March 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

1. Claims 1-25 have been examined.

### *Priority*

2. This application repeats a substantial portion of prior Application No. 09/174,200, now U.S. Patent No. 6,219,706, filed 16 October 1998, and adds and claims additional disclosure not presented in the prior application. Since this application names an inventor or inventors named in the prior application, it may constitute a continuation-in-part of the prior application. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78.

### *Drawings*

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: item "13" on page 17, line 21. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFG 1.84(l) because they do not have solid lines of uniform thickness. A proposed drawing correction or

corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "said switching process component" in page 25, line 13. There is insufficient antecedent basis for this limitation in the claim. For purposes of the prior art search, it is being presumed that this refers to the "switching process" on page 25, line 9.

Claims 2-7 depend from rejected claim 1, and include all the limitations of that claim, thereby rendering those dependent claims indefinite.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-3, 8, 13, 15-17, 24, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,170,012 to Coss et al.

As per claims 1, 2, 8, 13, 17, Coss discloses a "domain support engine," which operates as a session manager operating within the firewall, and containing header and payload information (see figure 4), tracking session context, operating within the switching process (see column 5, line 35 to column 6, line 15). The DSE can create mini-sessions for additional, related transfers (see column 7, lines 24-33).

As per claims 3, 15, and 24, rules are implemented to delete sessions and mini-seesions authorized by them after a timeout (see column 4, line 35 to column 5, line 33).

As per claims 16 and 25, the invention disclosed by Coss can change rules dynamically (see column 8, lines 23-55).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 4-7, 9-12, 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,170,012 to Coss et al. as applied to claims 1, 8, further in view of Blake et al., RFC 2475, "An Architecture for Differentiated Services," 1998.

The system disclosed by Coss supports a rule for a "tunnel option" (see column 6, lines 63-67), but does not teach the use of the tunnel option to bypass rules application downstream. The "Rules List" disclosed by Coss is an ACL, and one skilled in the art implement the bypassing of rules by using a single rule to "pass everything."

Blake teaches the use of the DS (Differentiated Services) field for conditioning traffic for streamlined downstream treatment (see pages 12 and 13), and further teaches the use of tunneling in order to deploy DS fields (see pages 28 and 29).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Coss by supporting DS fields in conjunction with the tunnel option, in order to condition traffic for downstream treatment.

8. Claims 14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,170,012 to Coss et al.

Coss discloses several conditions under which sessions may be deleted, but does not explicitly state that sessions are to be deleted upon completion.

Official notice is given that the method of deleting completed processes upon completion in order to free memory and conserve CPU time is well-known in the art.

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the invention disclosed by Coss deleting sessions and their associated mini-sessions upon completion in order to free memory and conserve CPU time.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7, 24, and 25 of U.S. Patent No. 6,219,706 to Fan et al. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Regarding claims 1, 2, 8, 13, 17, and 22, Fan et al. discloses in claim 24 the tracking of TCP and UDP sessions in a manner that would require the instantiation of mini-sessions, and it would be obvious to one of ordinary skill in the art to do this by examining header information from the payloads.

Regarding claims 3, 14, and 23, the method of deleting completed processes in order to free memory space and conserve CPU time is well-known in the art. It would be obvious to one of ordinary skill in the art to delete completed sessions.

Regarding claims 4, 6, 7, 9, 18, and 20, the invention disclosed by Fan decides whether or not to examine the packet depending on whether or not certain conditions are met. The method of setting flags in a packet header in order to affect treatment of a packet further downstream is well-known in the art, and the implementation of a "pass" or "do not divert" flag would therefore be obvious.

Regarding claims 5, 10-12, 19, and 21, Fan discloses the use of access control lists in claim 7.

Regarding claims 15, 16, 24, and 25, Fan discloses the disabling of timed-out sessions in claim 25. It would be obvious to one of ordinary skill in the art to delete the session without communicating with the firewall module.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,796,942 to Esbensen discloses a system for capturing and handling session-related packets.

U.S. Patent No. 5,898,830 to Wesinger, Jr. et al. discloses a firewall that prohibits traffic passing through a firewall for which no session has been established.

U.S. Patent No. 6,067,569 to Khaki et al. discloses the use of caches in the forwarding of network packets related to a session.

U.S. Patent No. 6,147,976 to Shand et al. discloses a packet filter that decides based upon a filtering matrix.

U.S. Patent No. 6,157,955 to Narad et al. discloses a packet processing system including a policy engine that can filter according to sessions.

U.S. Patent No. 6,182,149 to Nessett et al. discloses the filtering of packets at different stages in a network.

U.S. Patent No. 6,321,259 to Ouellette et al. discloses the filtering of packets based upon a database of group memberships.

U.S. Patent No. 6,496,935 to Fink et al. disclose a pre-filtering module for a firewall.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (703) 305-7727. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 4:00 PM Eastern Time. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse, can be reached on (703) 308-4789.

**Any response to this action should be mailed to:**
Commissioner of Patents and Trademarks
Washington, DC 20231
**Or faxed to:**
(703) 872-9306
Hand-delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive, Arlington, VA 22202, Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MEH

December 3, 2003

GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100